NASA GLENN RESEARCH CENTER
SEED TASK 01 ADDENDUM No. 1
DATE: MAY 13, 2014
SOLICITATION NO.: NNC14ZFD020J
PROJECT ID: COF20196
PROJECT TITLE: FY14 LEWIS FIELD STORM SEWER SYSTEM REPAIR, PHASE 1

A. GOVERNMENT CLARIFICATIONS

The following clarifications are provided by the Government to explain the scope of work for the FY14 LEWIS FIELD STORM SEWER SYSTEM REPAIR, PHASE 1 project. This is scope of work that has been changed, omitted or requires clarification.

CLARIFICATION No. 1

The following describes the Glenn Research Center Digging, Trenching, and Excavating Permit Procedure and Policy Requirements:

Digging, Trenching and Excavating Permit Procedure

- No excavation shall commence without all portions of the NASA GRC permit form complete.
- An excavation permit will be required every 3 months or to work areas limited to a 400 linear foot section or a 400 foot by 110 foot area (approximately 1.0 acre). Work areas are to be divided and organized by street, parking lot, or building location. The Contractor shall submit desired area for consideration. At the discretion of the NASA Civil Systems Manager these limits may be adjusted to fit the needs of a given project. The Civil Systems Manager will consult the NASA Construction Manager (CM) and/or NASA Inspector and Contractor when making this decision, but safety of the crew and protection of the existing infrastructure will always be the most important consideration.
- Contractor is required to request remarking and validation of work area every two weeks.
- Contractor is required to verify (pothole) all utilities as identified on NASA Underground Record Drawing (URD) prior to completing infrastructure excavation (note: the URDs are also used as the background information for the design drawings dated 01/29/2014). The Contractor shall contact the NASA CM/Inspector to initiate the utility verification process. The NASA Surveyor will verify the exposed utilities match those identified on the URDs. If there is a question on a utility location or identification the NASA CM/Inspector shall contact the NASA Civil Engineer for further direction prior to proceeding.
    - After potholing and completion of the permit form the Contractor may proceed, after Government concurrence, with the remaining excavation and utility installation.
- Contractor shall apply for excavation permit five working days prior to the start of excavation activities.
- Contact the NASA CM one day prior to backfill to allow NASA Surveyor to obtain survey information.
- Daily field tag-ups among Contractor, Excavation Subcontractor(s), and NASA CM/Inspector/Facility Operations Specialist (FOS) shall be required at the work site and recorded within the permit. The NASA CM/Inspector/FOS shall request the presence of the NASA Surveyor or Civil Engineer as required. Contractor shall log each meeting and scope discussion on the permit form.

Policy Requirements

The Contractor or Excavation Subcontractor(s) must provide utility and excavation competent person overseeing each excavation permit. Competent person must be at the physical excavation site 100% of the time comparing construction documents to the URDs, auditing the

excavation process, evaluating utility markings and typical symbols vs. details, and ensuring the excavation permit process is followed. Qualifications for each competent person shall be submitted within 45 days after NTP1.

- Utility and Excavation Competency and Field Expectations Defined:
    - Follow policy and procedures for excavation and utility identification.
    - Aid in validation/coordination of identification of utilities.
    - Understand each utility installation, operations, and possible hazards.
    - Audit and document government excavation policy and procedures used.
    - Stop work if policy and procedures are not followed.
    - Translate utility and excavation requirements between Contractor and Government Personnel.
    - Read and compare URDs and Construction Drawings for conflicts or issues with excavation and utilities.
    - Knowledgeable in all OSHA excavation policies and procedures.
    - Working knowledge of trenching, excavation, horizontal directional drilling, underground construction, shoring, soil types, hydro testing and pigging, and welding & fusion procedures.
    - At least 5 years of concurrent experience installing underground infrastructure and excavating.

CLARIFICATION No. 2

Storm Sewer System Repair, Phase 1 Inspection Reports are included as ATTACHMENT to this Addendum No. 1. These inspection reports are provided by the Government for information only.

CLARIFICATION No. 3

Replace existing subpart 3.3.5 of specification section 01 11 00.98, SUMMARY OF WORK, with the following:

3.3.5 Maintenance of Vehicular and Pedestrian Traffic

Contractor shall close one roadway at a time or no more than two or more sections of road concurrently. The contractor shall maintain access by traffic control devices and/or flaggers. Contractor shall restore the roadway to the finished configuration in accordance to the specifications (i.e. spring-summer-fall) or provide temporary impervious non-slip surface prior to closing an additional roadway or section of a road.

Contractor shall phase construction work to leave parking areas open or install temporary driveways. Contractor shall maintain two points of emergency ingress/egress and one point of constant ingress/egress to a roadway for all buildings for vehicle and pedestrian access.

Contractor to maintain pedestrian ingress/egress if sidewalks are impacted. Provide alternate impervious non-slip walking surfaces and mark/sign the walkway in accordance with the Ohio Manual of Uniform Traffic Control Devices (OMUTCD). This shall be considered part of the Maintenance of Traffic and Pedestrian Plan (MOT).

Contractor shall create a MOT in accordance with the OMUTCD. The MOT drawings within package are for general information and guidance. Twenty-one calendar days prior to any proposed closure, the MOT shall be submitted for Government review and approval. A minimum three week coordination period is required prior to any closure. If no work is begun within the closed area within a three-day period the area will be reopened and a new MOT plan will be required. Allow a minimum of three weeks for Government review of the resubmitted MOT.

Contractor shall provide temporary flagging, lane, and/or road closures for access to manholes located in roadways.

Contractor shall stagger the work to allow two-way traffic on Walcott and Taylor Roads at all times. One lane of West Area Road must be maintained at all times with two-way traffic controlled by a signal as specified. Submit a MOT for approval.

CLARIFICATION No. 4

Add the following subpart 3.3.9 to specification section 01 11 00.98, SUMMARY OF WORK:

3.3.9 Striping and Pavement Markings

All striping and pavement marking activities shall be completed outside of the normal duty hours or on weekends.

CLARIFICATION No. 5

Add the following subpart 3.3.10 to specification section 01 11 00.98, SUMMARY OF WORK:

3.3.10 Protection of Open Excavations

All open excavations in Contractor's construction work zone(s) shall be protected and secured at the end of each working day or shift. All open excavations must be covered, fenced-in, or secured by another NASA-approved method. Additionally, the Contractor will be required to provide a work zone that isolates construction work from the general population. This isolation can be achieved by barricading, OMUTCD control devices, or fencing at all times.

CLARIFICATION No. 6

Add the following subpart 3.3.11 to specification section 01 11 00.98, SUMMARY OF WORK:

3.3.11 Temporary Perimeter Fencing

Prior to removing any NASA perimeter fence the Contractor shall provide a temporary 8 ft. tall driven-post chain-link fence to extend the secured perimeter. Temporary perimeter fencing shall be inspected by NASA Security prior to removal of permanent fence to complete work. Upon completion of desired work Contractor shall restore perimeter fence per the details in the design drawings and remove temporary perimeter fencing.

CLARIFICATION No. 7

Specification sections 33 12 33.00 30, WATER METERING, and 43 21 39, PUMPS: WATER, VERTICAL TURBINE, can be removed from the specifications. Manufacturer and model number information for the sampling station equipment is included in the applicable design drawings dated 01/29/2014.

B. CONTRACTOR QUESTIONS AND ANSWERS

The following questions were submitted by Contractors regarding the scope of work for the FY14 LEWIS FIELD STORM SEWER SYSTEM REPAIR, PHASE 1 project. The answers are provided by the Government.

QUESTION No. 1

Can the contractor provide compacted gravel surface flush to finish grade for temporary trench backfill instead of steel trench plate prior to repaving areas?

ANSWER:

Yes, a compacted gravel surface flush to finish grade can be used but not as a temporary road or pedestrian surface.

QUESTION No. 2
Please confirm that the contractor is responsible to locate, protect in place and repair (at no cost to the government) all existing utilities.
ANSWER:
Yes, Contractor is responsible to locate and protect in-place, at no additional cost to the Government, all existing utilities. Contractor is responsible to repair, at no additional cost to the Government, all existing utilities damaged during construction.

QUESTION No. 3
Please provide a bid schedule form that identifies a phasing or scheduling.
ANSWER:
For information regarding bid schedule see design drawing G-001 dated 01/29/2014 and specification section 01 11 00.98, subparts 1.1.1 and 1.1.2. For information regarding phasing and scheduling see specification section 01 11 00.98, part 3.

QUESTION No. 4
Can the contractor have and excavate all areas at one time?
ANSWER:
No. Contractor must coordinate with the Government sequencing of work to limit impact to normal center operations, safety, and other construction projects. See CLARIFICATION No. 3 of this Addendum No. 1 and specification section 01 11 00.98, SUMMARY OF WORK, part 3.3, Construction Implementation, for additional information.

QUESTION No. 5
Can the contractor cover trenches and then repave several areas / phases at one time?
ANSWER:
Yes. Contractor must coordinate with the Government sequencing of work to limit impact to normal center operations, safety, and other construction projects. Contractor can provide a NASA-approved temporary surface (asphalt or concrete; reference QUESTION No. 1 of this Addendum No. 1). See specification section 01 11 00.98, SUMMARY OF WORK, part 3.3, Construction Implementation, including CLARIFICATIONS of this Addendum No. 1 for additional information.

QUESTION No. 6
The traffic control plan for Outfall 8 appears to be missing, it appears there are 3 major road crossing in this section of work. Please provide the traffic control plan for Outfall 8.
ANSWER:
The scope of work for Outfall 8 is relining. If required, Contractor shall provide temporary flagging and/or road closures for access to manholes located in roadways. See specification section 01 11 00.98, SUMMARY OF WORK, subpart 3.3.5, Maintenance of Vehicular and Pedestrian Traffic, for additional information.

QUESTION No. 7
Plan sheet C-166 is identified as Outfall 1, Alignment 06-G-S Plan & Profile STA 0+00 – 1+00. I suspect this is a misprint and should be Outfall 6, Alignment 06-G-S Plan & Profile STA 0+00 – 1+00. Please confirm.
ANSWER:
See design drawing C-166 dated 01/29/2014 for correction.

QUESTION No. 8
Outfall 21 appears to be overlapping the scope of work as Outfall 1 sheet 6. Please provide a distinction of these areas as it relates to phasing, schedule and bid form cost line items.
ANSWER:
Work for Outfalls 1 and 21 are independent of each other. See design drawing G-003 dated 01/29/2014 for clarification.

QUESTION No. 9
Are there any soil boring or geotechnical reports that can be made available to bidders?
ANSWER:
Soil boring reports are not available. Geotechnical reports are not available.

QUESTION No. 10
Plan sheet G-011 contains a section on Asbestos-Containing Materials (ACM). Where are these gaskets that may be ACM?
ANSWER:
It is not anticipated, but in the event that an existing mechanical gasket for a pressurized line is interrupted the Contractor shall comply with the information on design drawing G-011.

QUESTION No. 11
The specifications contain a section on Lead Paint Abatement, 02 83 00.98. Please clarify where contractors may encounter lead paint?
ANSWER:
It is not anticipated, but in the event that lead paint is encountered the Contractor shall comply with specification section 02 83 00.98.

QUESTION No. 12
Please provide details of the booster pump, sampler & required piping for those noted on plan sheet C-151. Does the pump or sampler require external power? If so, what/where is the nearest power source?
ANSWER:
The booster pump is powered by the sampler. The sampler is powered by an independent 12-volt power source. The Contractor shall reference manufacturer specifications and provide and install a 12-volt power source compatible with the sampler.

QUESTION No. 13
Does the sampling station on sheet C-168 require a pump or portable sampler?
ANSWER:
See details on design drawing C-149 dated 01/29/2014 for clarification.

QUESTION No. 14
Plan sheet C-108 notes a relocation of the flow meter equipment in SMH 01-1100. Please provide details of the flow meter equipment and desired relocation.
ANSWER:
See Note 2 on design drawing C-111 dated 01/29/2014 for clarification.

QUESTION No. 15
From an experienced CIPP Contractor:
The Cured-in-Place Pipe Lining specification 22 05 83.63 notes an epoxy resin requirement. The spec states that the resin utilized must be epoxy resin and NSF-61 approved. It states that no polyester or vinyl ester resins would be allowed.

Based on our experience, we would typically see the NSF-61 requirement for potable drinking water lining projects, not for storm lines. The epoxy resin is a very difficult resin to work with as the resin, in the mass required to wet out a 60" liner, would become quite volatile and may exotherm while in transport on the refrigerated truck. In addition, the working time which we have with this resin is decreased. In order to properly cure epoxy resin and cool it down, we would have to perform the work using water so we can control the temperatures more closely. If we were to utilize water inversion/cure vs air inversion steam cure, we would add a step to the process and have to pump the cure/cool down water over a sanitary sewer.

Utilizing epoxy resin on storm lines will roughly triple the cost of the project and is not required or typical based on our previous work experience.

If styrene is the concern, we would suggest a styrene free vinyl ester resin, Please review this spec and clarify if the use of an alternate resin would be acceptable, or not.
ANSWER:
A non-styrene, odor-free vinyl ester resin with zero VOC emissions would be considered if it meets the requirements outlined in specification section 22 05 83.63, CURED-IN-PLACE PIPE (CIPP) LINING.

QUESTION No. 16
Please provide plans that outline the desired dimensions for resurfacing of Walcott and Moffett Roads.
ANSWER:
See design drawings C-200, C-201, and C-202 dated 01/29/2014 for clarification.

QUESTION No. 17
Regarding the booster pumps and flow meters:

a. The booster pump option- is this truly necessary?
b. How much VERTICAL lift (from pipe to surface) is required?
c. What is distance between booster pump and 3700 sampler?
d. Model 3700 is a non-refrigerated sampler- please confirm that this is the correct type.
e. Is the 3700 to be paced by a flow meter? If so, what type of signal? 4-20 mA or pulse?

ANSWER:

a. Yes, a booster pump is required.
b. 40 ft.
c. 10 ft. or less, it is a mobile unit.
d. Model shall be 3700C, see design drawing C-149 dated 01/29/2014.
e. Yes, 5 to 15 volt DC pulse, reference manufacturer specifications.

QUESTION No. 18
Outfall 8 appears to have no erosion control pollution prevention (silt fence or inlet protection). Please confirm.
ANSWER:
See design drawing G-018 dated 01/29/2014 for clarification.

QUESTION No. 19
RE: Relining CIPP, the specifications require epoxy. The working time pot life of all known epoxy product do not provide enough working time to do most of the locations. I have solicited 6 different manufacturer and contractor teams and have received the same information. The industry standard would be to use a polyester resin. Please advise.
ANSWER:
A non-styrene, odor-free vinyl ester resin with zero VOC emissions would be considered if it meets the requirements outlined in specification section 22 05 83.63, CURED-IN-PLACE PIPE (CIPP) LINING.

QUESTION No. 20
RE: Relining CIPP, a significant preparation task for the CIPP process is to clean existing pipes prior to the CIPP process. It would be an unforeseen condition to price cleaning the pipes without thorough inspection, unless the RFP qualifies an approximation and provided for an add deduct cost change under differing conditions.
ANSWER:
See specification section 22 05 83.63, CURED-IN-PLACE PIPE (CIPP) LINING, subpart 3.1.2, for pipe preparation. CCTV inspection required pre-cleaning and pre- and post-lining. Existing pipe debris within storm sewers to be flushed downstream as part of this contract.

QUESTION No. 21
If a site visit will occur please provide access for inspection of the manholes by opening them during the site walk to allow an above ground look down into the manholes. This is required to understand the scope and conditions for relining the manholes, it will give an indication what the cleaning will be, and it is required to understand the access for the CIPP lining process.
ANSWER:
One of the manholes of Outfall No. 8 was opened during the May 9 site showing. Also reference CLARIFICATION No. 2 of this Addendum No. 1.

QUESTION No. 22
It would be helpful to provide an approximate age of existing systems, if possible.
ANSWER:
Some existing systems at Lewis Field were installed in the 1940s/1950s.

QUESTION No. 23
C-111 Reinforcing steel, please identify S401, L401, L402. Is this rebar, size #5 or #6 or #7?
ANSWER:
See design drawings C-107 and C-120 dated 01/29/2014 for clarification. First bar mark indicates shape (S=straight, L=angle), first number designation indicates bar size (no. 4), and the last two numbers indicate unique identification for re-steel table.

QUESTION No. 24
C-111 Reinforcing steel, please locate DETAIL A on horizontal and vertical alignment.
ANSWER:
See detail 'A', indicating reinforcing schedule, on design drawings C-107 and C-120 dated 01/29/2014.

QUESTION No. 25
C-111, please provide a detail for note 5, provide (4) 8" round openings.
ANSWER:
See design drawing C-531 dated 01/29/2014 for detail.

QUESTION No. 26
C-111 key note 40, casting to be realigned. Is this manhole location also to be re-lined SIPP? Is the realignment just at the surface finish grade?
ANSWER:
See design drawings dated 01/29/2014 for modified casting key notes.

QUESTION No. 27
The Note 1. Backfill under or within 6 feet of pavements with low strength grout. Is it the intention to backfill from full depth of excavation and embed the new pipes up to the subgrade for finish paving and then pave over the grout?
ANSWER:
See typical section detail on design drawing C-513 dated 01/29/2014.

QUESTION No. 28
Will large amounts of potable water be available to the contractor for cleaning of the lines and curing of the CIPP liner at no cost to the contractor?
ANSWER:
Yes, water will be available at no cost to the Contractor. Contractor must provide a certified backflow preventer to attach to GRC hydrants.

QUESTION No. 29
The current specification for the CIPP lining requires an epoxy resin system along with a pulled in place liner. This system specified is typically utilized on potable water main rehabilitations and not gravity sewers. Would NASA approve an alternate resin material? Typically a standard polyester or vinyl ester resin system would be more than sufficient for a storm water application such as this project. However due to environmental impacts of the outfalls in the river, a non-styrene resin application would be recommended for a project that discharges into the Rocky River. Please clarify which resin application to use on this project.
ANSWER:
A non-styrene, odor-free vinyl ester resin with zero VOC emissions would be considered if it meets the requirements outlined in specification section 22 05 83.63, CURED-IN-PLACE PIPE (CIPP) LINING.

QUESTION No. 30
Will cure water be able to be discharged directly down the storm lines or will it need to be pumped to sanitary lines. Answer could be dependent on the answer to question 2(9).
ANSWER:
Yes, cure water may be discharged to storm lines. Contractor must provide and submit for Government review, environmental testing results confirming cure water meets Ohio EPA allowable discharge for storm water in accordance with GRC Permits. If not, cure water must go to sanitary sewer lines.

QUESTION No. 31
How will the material generated from cleaning of the storm lines prior to lining be disposed? Will NASA provide a location to dispose of? How will the material be classified – commercial/industrial or solid waste?
ANSWER:
Minor debris, 1/8 of invert or less, generated from cleaning of storm lines to be flushed downstream. Debris is not classified. If major debris, 1/8 invert or more, is found at time of video inspection then Contractor to notify Government for direction.

QUESTION No. 32
Due to the steep grades of the sewer outfalls, some of the lines will require a low pressure air and steam up to 20 psi for the installation and cure of the liner. Will there be an issue using the 20 psi pressure?
ANSWER:
Contractor shall install lining in accordance with specification section 22 05 83.63, CURED-IN-PLACE PIPE (CIPP) LINING.

QUESTION No. 33
Are there pre-existing sewer videos that can be obtained to see the condition of the existing sewers to be lined?
ANSWER:
See CLARIFICATION No. 2 of this Addendum No. 1.

QUESTION No. 34
Sheet C-176, 60” Storm sewer 59’ between SMH08-1100 & HW08-0000: Is this to be relined or replaced? Plans call out relining & replacement (59’ – 60” Conduit @ 1.85%) G-002 shows section to be relined.
ANSWER:
See design drawing C-174 dated 01/29/2014 for clarification.

QUESTION No. 35
Sheet C-180/181, The storm pipe section between SMH08-2200 & SMH08-2100: Is the existing 30" RCP Pipe going to be relined or replaced with 36" diameter new pipe. Plan view indicates relining (Symbol) & replacement code. Profile shows 30" diameter G-002 shows section to be relined.
ANSWER:
See design drawing C-178 dated 01/29/2014 for clarification.

QUESTION No. 36
Sheet C-401, Please clarify "Hashing". Some areas are very difficult to discern between commercial/industrial fill soil and solid waste soil. If possible could the areas be differentiated with a color?
ANSWER:
See design drawing C-401 dated 01/29/2014 for clarification.

QUESTION No. 37
Sheet C-186, Reference to Sheet C-304 in Note 3 is wrong. Should it be C-309?
ANSWER:
See design drawing C-184 dated 01/29/2014 for clarification.

QUESTION No. 38
Sheet C-134, Profile view references 38'-6" Conduit RCP IV @ 0.89%. Should this be PVC?
ANSWER:
This section of pipe as noted has been removed from the project's scope of work. See design drawings dated 01/29/14 for clarification.

QUESTION No. 39
Sheet C-166, Should description read Outfall 6 instead of 1?
ANSWER:
See design drawing C-164 dated 01/29/2014 for correction.

QUESTION No. 40
Sheet C-117 & C-118, What is the Modification No. 2? "Alignment shall be removed with Modification No." Please clarify.
ANSWER:
This pipe alignment as noted has been removed from the project's scope of work. See design drawings dated 01/29/14 for clarification.

QUESTION No. 41
The CIPP specification calls for NSF61 approved epoxy resin. Would a "green resin" that meets the other qualifications (not polyester or vinyl ester, not containing silicones, stereates, and/or natural waxes that would aversely affect the adhesive properties or any other chemical or physical properties of the CIPP liner) be acceptable?
ANSWER:
A non-styrene, odor-free vinyl ester resin with zero VOC emissions would be considered if it meets the requirements outlined in specification section 22 05 83.63, CURED-IN-PLACE PIPE (CIPP) LINING.

QUESTION No. 42
The CIPP specification calls only for ASTM F1743 installation (pull in place), but references ASTM F1216 (inversion method) in the System Description in Section 22 05 83.63. Is the inversion method of ASTM F 1216 an allowable method?
ANSWER:
The inversion method of ASTM F1216 is an allowable installation method if the requirements outlined in specification section 22 05 83.63, CURED-IN-PLACE PIPE (CIPP) LINING, are met.

QUESTION No. 43

Option 5 – Where are the details and limits for the Walcott Road Resurfacing? Where are the striping details for Walcott Road Resurfacing?

ANSWER:

See design drawings C-201 and C-202 dated 01/29/2014 for Walcott Road resurfacing details.
See design drawings C-715 and C-716 dated 01/29/2014 for Walcott Road striping details.

QUESTION No. 44

In 5 locations, there are catch basins called out as 2-3A. There is no detail provided in the plans for a 2-3A. Was this a mistake and were either supposed to be a 3A or a 2-3? See the following locations for reference:

Alignment 01-N-S – 2-3A – 1 each
Alignment 01-O-S – 2-3A – 2 each
Alignment 01-P-S – 2-3A – 1 each
Alignment 01-Q-S – 2-3A – 1 each

ANSWER:

The catch basins are either '3A' or '2-3':

Alignment 01-N-S – 2-3
Alignment 01-O-S – 3A
Alignment 01-P-S – 2-3
Alignment 01-Q-S – 3A

See design drawings dated 01/29/2014 for clarifications.